

CLAIMS

Having thus described the invention, what is claimed is:

5

1. A method of fabricating a web suitable for use in making a personal care absorbent article, the method comprising:

10

(a) fabricating a resiliently extensible web by bringing together and securing to each other (i) web substrate elements, and (ii) resiliently stretchable elastic elements in stretched condition, the securement between the elastic elements and the web substrate elements being defined by alternating zones of securement and non-securement of the elastic elements to at least one of the web substrate elements along a length of the web substrate;

15

20

(b) deactivating elastic elements in the non-securement zones thereby (i) to attenuate resilient retraction of the web in such non-securement zones in response to activity of the elastics and correspondingly (ii) to distinguish the securement zones as relatively more resiliently stretchable and the non-securement zones as relatively less resiliently stretchable; and

25

(c) applying, to the relatively non-stretchable non-securement zones, patches of mechanical fastener material extending generally between respective adjacent ones of the relatively more resiliently stretchable securement zones.

30

2. A method of fabricating a workpiece suitable for use in a personal care article, comprising creating such workpiece from a web fabricated as in Claim 1, including defining a first end of such workpiece by defining a free end of the web through a respective patch of the hook fastener material, and separating the workpiece from the web through a second respective patch of the hook fastener material such that hook fastener patch material is defined at opposing end portions of the respective workpiece.

35

3. A method of fabricating an extensible web from respective ones of first and second workpieces, and wherein such web is suitable for use as a substrate in making a personal care article, the method comprising arranging workpieces  
5 defined in Claim 2 in generally end-to-end relationship with intervening elements, and releasably attaching the hook material on the workpieces to hook receptive areas on the intervening elements, thus to releasably attach the workpieces to the intervening elements in fabricating a length of the extensible web.

10 4. A method as in Claim 3 wherein the releasable attachment of the workpieces to the intervening elements comprises the only attachment between the workpieces and the intervening elements.

15 5. A method as in Claim 3, the method comprising developing an alternating arrangement of the workpieces and the intervening elements such that each such workpiece is between two such intervening elements and each such intervening element is between two such workpieces.

20 6. A method of fabricating a extensible web and wherein such web is suitable for use as a substrate in making a personal care article, the method comprising arranging workpieces as in Claim 2 in generally end-to-end relationship  
25 with intervening elements, respective ones of the intervening elements having lengths and widths defining respective surface areas, the hook receptive areas of such respective intervening elements generally corresponding to such surface areas, the method including releasably attaching the hook material on the workpieces to the intervening elements at the hook receptive areas, thus to  
30 releasably attach the workpieces and the intervening elements to each other in fabricating a length of the extensible web.

35 7. A method as in Claim 1, including deactivating elastic elements in the non-securement zones by cutting such elastic elements.

8. A method as in Claim 1, including deactivating elastic elements in the non-securement zones by applying ultrasonic energy to such elastic elements through an intervening layer.

5

9. A method of fabricating a web suitable for use in making a personal care absorbent article, the method comprising:

10

(a) fabricating a base web comprising multiple workpieces;

(b) applying patches of mechanical fastener material to such base web; and

15

(c) defining a first end of such workpiece by defining a free end of the base web through a respective patch of the fastener material, and separating the workpiece from the base web through a second respective patch of the fastener material such that a patch of fastener material is defined at both opposing end portions of the respective workpiece.

20

25

10. A method of fabricating a web from respective ones of first and second workpieces, and wherein such web is suitable for use as a substrate in making a personal care article, the method comprising arranging workpieces defined in Claim 9 in generally end-to-end relationship with intervening elements, and releasably attaching the fastener material on the workpieces to fastener receptive areas on the intervening elements, thus to releasably attach the workpieces to the intervening elements in fabricating a length of composite web.

30

11. A method as in Claim 10 wherein the releasable attachment of the workpieces to the intervening elements comprises the only attachment between the workpieces and the intervening elements.

35

12. A method as in Claim 10, the method comprising developing an alternating arrangement of the workpieces and the intervening elements such that

each such workpiece is between two such intervening elements and each such intervening element is between two such workpieces.

5           13. A method of fabricating a web and wherein such web is suitable for use as a substrate in making a personal care article, the method comprising arranging workpieces as in Claim 10 in generally end-to-end relationship with intervening elements, respective ones of the intervening elements having lengths and widths defining respective surface areas, the fastener receptive areas of such respective  
10 intervening elements generally corresponding to such surface areas, the method including releasably attaching the mechanical fastener material on the workpieces to the intervening elements at the fastener receptive areas, thus to releasably attach the workpieces and the intervening elements to each other in fabricating a length of the composite web.

15  
  
          14. A method as in Claim 9 wherein said fastener material comprises a mechanical hook material.

20  
  
          15. A method as in Claim 10 wherein said intervening elements comprise a material which demonstrates fastener receptive properties, wherein the material of said intervening element is capable of forming engagement relationships with respective fastener materials.

25  
  
          16. A method as in Claim 10 including affixing said fastener receptive area, as a separate web element, to said intervening element, wherein said fastener receptive area has distinct physical edges.

30  
  
          17. A method as in Claim 10, said fastener receptive area being integral with a major surface of said intervening element, said fastener receptive area, thus, being void of distinct physical edges.

18. A method as in Claim 9, said base web comprising a neck-bonded laminate or a stretch-bonded laminate.

5           19. A method of fabricating a self-supporting web of material from respective workpieces and intervening elements, wherein such self-supporting web is suitable for use in making a personal care article, the method comprising:

10           (a) bringing together an intervening element having first and second ends, a first workpiece having third and fourth ends, and a second workpiece having fifth and sixth ends, with first, second, and third lengths of the respective first and second workpieces and the intervening element aligned with each other in a generally common surface, and with the second and third lengths of the first and second workpieces operating as extensions of the first length of the intervening element, on opposing ones of the first and second ends of the intervening element; and

15           (b) releasably attaching (i) the first workpiece and the intervening element to each other at the respective first and fourth ends, using releasable fasteners, and (ii) releasably attaching the second workpiece and the intervening element to each other at the respective second and fifth ends, using releasable fasteners, such that the first, second, and third lengths, in combination, define a self-supporting web segment having a fourth length and wherein the fourth length of the web segment so defined by the combination of the first, second, and third lengths is greater than any of the first, second, and third lengths, individually, of the respective first and second workpieces and the intervening element, and wherein additional such alternating workpieces and intervening elements can be releasably attached to one or both of the third and sixth ends of the respective first and second workpieces using additional releasable fasteners, to thereby further extend the length of the self-supporting web, and wherein the releasable fasteners employed in so assembling the self-supporting web can be released so as to release respective ones of the workpieces and intervening elements of the self-supporting web from each other.

20. A method as in Claim 19 wherein the second and third lengths of the first and second workpieces are defined at rest, wherein the first and second workpieces are resiliently extensible by at least 100 percent of the respective second and third lengths, the method including attaching the first and second workpieces to the intervening element while the respective first and second workpieces are stretched substantially to stop.

21. A method as in Claim 19 wherein the second and third lengths of the first and second workpieces are defined at rest, wherein the first and second workpieces are resiliently extensible by at least 100 percent of the respective second and third lengths, the method including attaching the first and second workpieces to the intervening element while the respective first and second workpieces are being subjected to a stretching tension stretching the lengths of the respective first and second workpieces at least 50 percent from the respective second and third lengths.

22. A method as in Claim 19 wherein the second and third lengths of the first and second workpieces are defined at rest, wherein the first and second workpieces demonstrate effectively no elasticity, the method including attaching the first and second workpieces to the intervening element.

23. A method as in Claim 19 wherein the first and second workpieces are attached to the intervening element by fasteners having attachment capability over a substantial portion of an area defining the intervening element.

24. A method as in Claim 19 wherein the first and second workpieces are attached to the intervening element by first and second attachments defining mechanical hook fasteners on one of the respective workpieces and/or the intervening element interacting with mechanical loops on the other of the respective workpieces and/or the intervening element.

25. A method as in Claim 19, including fabricating a web of indefinite length by adding alternating workpieces and intervening elements to the web segment so as to develop a self-supporting web of indefinite length wherein support of such self-supporting web along the indefinite length of such web is defined by the alternating workpieces and intervening elements making up the web.

26. A method as in Claim 19, including defining, in the workpieces, hook-type mechanical fasteners effective to engage the intervening elements.

27. A method as in Claim 19 wherein the releasable attachment of the workpieces to the intervening elements comprises the only attachment between the workpieces and the intervening elements.

28. A self-supporting web of sheet material suitable for use in making a personal care article, said self-supporting web comprising a sequence of at least first and second workpieces and intervening elements, including opposing ends on the respective workpieces and intervening elements, the respective workpieces and intervening elements having unstressed lengths between the respective ends thereof, the unstressed lengths of the respective workpieces and intervening elements being aligned with each other in a generally common surface, and operating as extensions of each other, such that the unstressed lengths, in combination, define a length of said web, said workpieces and intervening elements, in combination, defining self-supporting longitudinal strength of said web, the workpieces and intervening elements being releasably attached to each other, using releasable fasteners, and wherein the releasable fasteners employed in so assembling the web can be released so as to release respective ones of the workpieces and intervening elements from the self-supporting web.

29. A self-supporting web as in Claim 28 wherein ones of the workpieces can be resiliently extended at least 100 percent from the unstressed lengths of the respective workpieces.

30. A self-supporting web as in Claim 28, including employing hook and loop fastening structure in effecting the releasable fastening of the workpieces and intervening elements.

5

31. A self-supporting web as in Claim 28 wherein the releasable attachment of the workpieces to the intervening elements comprises the only attachment between the workpieces and the intervening elements.

10

32. A method of fabricating personal care absorbent articles, comprising:

15

(a) advancing along a processing line a first web having a first length, the first web being suitable for use in making a personal care article, and comprising at least workpieces and intervening elements releasably attached to each other using releasable fasteners to thereby define such first web and self-supporting longitudinal strength of such web, whereby such workpieces and intervening elements generally define the structure and the structural integrity of the first web;

20

25

(b) concurrently advancing a second web having a second length along the processing line and generally parallel to the first web, and defining a space between the first and second webs, the second web being suitable for use in making such personal care article;

30

(c) applying and attaching absorbent crotch portion elements to the first and second webs at spaced intervals along the lengths of the respective webs, and bridging the space between the first and second webs, thereby to form a composite web comprising the first and second webs and the respective crotch portions, a given respective crotch portion element having a front segment attached to the first web and a rear segment attached to the second web;

35

(d) bringing the first and second webs of the composite web into facing relationship with each other, including bringing the respective front



and rear segments of the respective crotch portion elements into facing relationship with each other;

(e) forming side seam bonds joining the first and second webs to each other at spaced locations along the length of the composite web, thereby to form a composite web sausage having an indefinite length; and

(f) separating discrete lengths of the composite web sausage from the indefinite-length composite web sausage at or proximate respective ones of the side seam bonds, thereby to define respective personal care articles.

33. A method as in Claim 32 wherein such workpieces can be resiliently extended at least 100 percent from unstressed lengths thereof.

34. A method as in Claim 32, including releasably attaching the workpieces to the intervening elements by employing mechanical fasteners and corresponding hook receptive areas on respective ones of the workpieces and intervening elements.

35. A method as in Claim 32 wherein the releasable attachment of the workpieces to the intervening elements comprises the only attachment between the workpieces and the intervening elements.

36. A personal care article comprising a front portion, a rear portion, and a crotch portion extending between said front portion and said rear portion, said front and rear portions each comprising opposing first and second side sections and a central section between the respective side sections, said rear portion and said front portion being attached to each other at respective side sections of the front and rear portions by side seams, said front portion comprising first and second workpieces corresponding to the side sections of the front portion, and an intervening element corresponding to the front central section, the first and second

workpieces being releasably attached to the intervening element by releasable fasteners, the releasable fasteners, prior to use by a user, comprising the only attachment attaching the first and second workpieces to the front central section.

5

37. A personal care article as in Claim 36 wherein said first and second workpieces can be resiliently extended at least 100 percent from unstressed lengths thereof.

10

38. A personal care article as in Claim 36 wherein said releasable fasteners comprise mechanical fasteners, received in hook receptive material defined at said intervening element.

15

39. A personal care article as in Claim 36 wherein said first and second workpieces are attached to the intervening element by fasteners having attachment capability over a substantial portion of an area defining the intervening element.

20

40. A personal care article as in Claim 36 wherein the first and second workpieces are attached to the intervening element by first and second attachments defining mechanical fasteners on one of the respective workpieces and/or the intervening element interacting with mechanical loops on the other of the respective workpieces and/or the intervening element.

25